

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-076994

(43)Date of publication of application : 22.03.1996

(51)Int.Cl.

G06F 9/06

G06F 17/60

(21)Application number : 06-206527

(71)Applicant : NEC CORP

(22)Date of filing : 31.08.1994

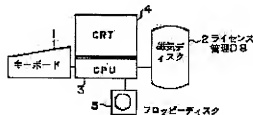
(72)Inventor : KUBOTA SACHIKO

## (54) METHOD AND DEVICE FOR MANAGEMENT OF SOFTWARE LICENSE

### (57)Abstract:

**PURPOSE:** To correspond to respective user's usage in detail such as the frequency of use and the period of use by individually setting up the available period of a license and the available period of an authorization code(AC).

**CONSTITUTION:** In the case of issuing a license, a license available period based upon a contact is inputted from a keyboard 1 and a user name, an object application name, the issue date of an issued license, and the available period of the license are recorded in a magnetic disk as license issuing processing. In the case of executing the issuing processing of an AC, an AC available period required by a user is inputted from the keyboard 1 and the issue data of the AC and the available period of the generated AC are similarly recorded in a license managing DB 2. Then the AC is generated and the generated AC is stored in a floppy disk 5 to be provided to the user. When an AC updating request is generated thereafter, the request is inputted from the keyboard 1.



## LEGAL STATUS

[Date of request for examination] 31.08.1994

[Date of sending the examiner's decision of rejection] 07.10.1997

[Kind of final disposal of application other than  
the examiner's decision of rejection or  
application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's  
decision of rejection]

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DETAILED DESCRIPTION

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## [Detailed Description of the Invention]

[0001]

[Industrial Application] Especially this invention relates to the license approach which defines a period and enables use of a software application about the software license approach.

[0002]

[Description of the Prior Art] It is very important on an enterprise for the investment cost of development of a software application to reach an immense amount of money, to protect application as design property in that the extra sensitive information on a design is contained with the application in the CAD field of LSI further, for example, and to prevent a precision information leak in recent years.

[0003] For the reason, mounting protection in a use conclusion of a contract (license agreement) and software is performed as a general measure as a means which protects software property and prevents unjust use.

[0004] A license is making use of application into the license system based on a contract, and protects the right of a developing agency. Based on a use contract, license dues are imposed in many cases, and, thereby, development costs can be collected to application development origin. Moreover, by doubling and offering AC (authorization code) which cancels protection, in case a user is provided with application, software protection can limit use of the application concerned to an authorization user, and can prevent an unauthorized use.

[0005] Conventionally, this AC generates what confirms the period corresponding to a license period based on a license agreement, and provides the user with it. For example, JP,4-104325,A determined the expiration date of application at the time of a use contract, and has taken means to verify whether it can perform with reference to AC to whenever [ tool execution-time ]. Moreover, at JP,1-166218,A, an estimated usable period is set up at the time of a use contract, and also how the tool use frequency after contract term termination recovers costs is shown to the list in a contract term by setting the grace period after a term as the warning period list in front of a contract expiration term.

[0006]

[Problem(s) to be Solved by the Invention] Above-mentioned JP,4-104325,A; in JP,4-166218,A, the license period is defined based on the prior use contract, and each is single-engined management to it. Moreover, in them, as shown in drawing 5, a license and AC actually carried on a user machine are under the same management.

[0007] In using the application concerned further after contract termination for the reason, the procedure of renewal of a contract is stepped on again, AC corresponding to the license which updated and updated the license succeeding is generated, and the time and effort of reprovding for a user occurs.

[0008] When using a tool as evaluation or continuation employment, it is common to contract and repeat in the appropriate period which expects use. Furthermore, also in case the case where a tool is a large sum and license dues are large sums, and use frequency are divided over a short period of time, it is necessary to repeat a series of processings of renewal of a contract, and there is a problem that an updating man day occurs each time.

[0009] The purpose of this invention is to offer the license management method and equipment which can respond to each user's applications, such as use frequency, a use period, etc. of a software application, finely, and offer AC by the minimum man day.

[0010]

[Means for Solving the Problem] The software license management method of this invention has the phase of setting the shelf-life of the license which is the use right of a software application, the phase of setting the shelf-life of the authorization code which is the file for use consent acknowledgement verification which enables actual use of said software application within the limits of the shelf-life of said license based on a demand of a user, and the phase that generates said authorization code according to the demand period of said authorization code.

[0011] Moreover, the software license management equipment of this invention If a license issue processing demand is made from a license management database, an input means, and said input means and an object application name and a demand user name are inputted From these input, judge whether a license is published or not, and in publishing As license issue processing, a demand user name, an object application name, The license expiration date inputted from the license date of issue and said input means is recorded on said license management database. Then, the authorization expiration date inputted from the authorization code date of issue and said input means as authorization code issue processing is recorded on said license management database.

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**CLAIMS**

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**[Claim(s)]**

[Claim 1] A software license management method including the phase of setting the shelf-life of the license which is the use right of a software application, the phase of setting the shelf-life of the authorization code which is the file for use consent acknowledgement verification which enables actual use of said software application within the limits of the shelf-life of said license based on a demand of a user, and the phase that generates said authorization code according to the demand period of said authorization code.

[Claim 2] Said 1st phase is a software license management method according to claim 1 which is what records a user name, an object application name, the license date of issue, and a license shelf-life.

[Claim 3] Said 2nd phase is a software license management method according to claim 1 or 2 which is what records the authorization code date of issue and an authorization shelf-life.

[Claim 4] The software license management method according to claim 2 or 3 which will judge whether it has passed over the license expiration date if the license is set up to an applicable user's demand application or it is set up when there is a renewal demand of an authorization code, and includes the authorization code date of issue, the phase which records an authorization code expiration date, and the phase which generates the authorization code according to an authorization code demand period about the updated authorization code if it is within a license expiration date.

[Claim 5] If a license issue processing demand is made from a license management database, an input means, and said input means and an object application name and a demand user name are inputted From these input, judge whether a license is published or not, and in publishing As license issue processing, a demand user name, an object application name, The license expiration date inputted from the license date of issue and said input means is recorded on said license management database. Then, the authorization expiration date inputted from the authorization code date of issue and said input means as authorization code issue processing is recorded on said license management database. A license authorization code issue means to store through the generated authorization code, When there is a renewal demand of an authorization code from said input means, said license management database to origin If the license is set up to an applicable user's demand application or it is set up, will judge whether it has passed over the license expiration date, and if it is within a license expiration date The authorization code date of issue and an authorization code expiration date are recorded on said license management database about the updated authorization code. Software license management equipment which has a renewal means of an authorization code to record through the generated authorization code.

[Claim 6] Software license management equipment according to claim 5 mounted in the stand-alone machine.

[Claim 7] Software license management equipment according to claim 5 with which said input means is prepared for a user host, and said license management database, said license authorization code issue means, and the renewal means of an authorization code are prepared for the license management host connected to the network with said user host.

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TECHNICAL FIELD

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[Industrial Application] Especially this invention relates to the license approach which defines a period and enables use of a software application about the software license approach.

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PRIOR ART

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[Description of the Prior Art] It is very important on an enterprise for the investment cost of development of a software application to reach an immense amount of money, to protect application as design property in that the extra sensitive information on a design is contained with the application in the CAD field of LSI further, for example, and to prevent a precision information leak in recent years. [0003] For the reason, mounting protection in a use conclusion of a contract (license agreement) and software is performed as a general measure as a means which protects software property and prevents unjust use.

[0004] A license is making use of application into the license system based on a contract, and protects the right of a developing agency. Based on a use contract, license dues are imposed in many cases, and, thereby, development costs can be collected to application development origin. Moreover, by doubling and offering AC (authorization code) which cancels protection, in case a user is provided with application, software protection can limit use of the application concerned to an authorization user, and can prevent an unauthorized use.

[0005] Conventionally, this AC generates what confirms the period corresponding to a license period based on a license agreement, and provides the user with it. For example, JP,4-104325,A determined the expiration date of application at the time of a use contract, and has taken means to verify whether it can perform with reference to AC to whenever [ tool execution-time ]. Moreover, at JP,1-166218,A, an estimated usable period is set up at the time of a use contract, and also how the tool use frequency after contract term termination recovers costs is shown to the list in a contract term by setting the grace period after a term as the warning period list in front of a contract expiration term.

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CLAIMS

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## [Claim(s)]

[Claim 1] A software license management method including the phase of setting the shelf-life of the license which is the use right of a software application, the phase of setting the shelf-life of the authorization code which is the file for use consent acknowledgement verification which enables actual use of said software application within the limits of the shelf-life of said license based on a demand of a user, and the phase that generates said authorization code according to the demand period of said authorization code.

[Claim 2] Said 1st phase is a software license management method according to claim 1 which is what records a user name, an object application name, the license date of issue, and a license shelf-life.

[Claim 3] Said 2nd phase is a software license management method according to claim 1 or 2 which is what records the authorization code date of issue and an authorization shelf-life.

[Claim 4] The software license management method according to claim 2 or 3 which will judge whether it has passed over the license expiration date if the license is set up to an applicable user's demand application or it is set up when there is a renewal demand of an authorization code, and includes the authorization code date of issue, the phase which records an authorization code expiration date, and the phase which generates the authorization code according to an authorization code demand period about the updated authorization code if it is within a license expiration date.

[Claim 5] If a license issue processing demand is made from a license management database, an input means, and said input means and an object application name and a demand user name are inputted. From these input, judge whether a license is published or not, and in publishing. As license issue processing, a demand user name, an object application name, The license expiration date inputted from the license date of issue and said input means is recorded on said license management database. Then, the authorization expiration date inputted from the authorization code date of issue and said input means as authorization code issue processing is recorded on said license management database. A license authorization code issue means to store through the generated authorization code, When there is a renewal demand of an authorization code from said input means, said license management database to origin. If the license is set up to an applicable user's demand application or it is set up, will judge whether it has passed over the license expiration date, and if it is within a license expiration date. The authorization code date of issue and an authorization code expiration date are recorded on said license management database about the updated authorization code. Software license management equipment which has a renewal means of an authorization code to record through the generated authorization code.

[Claim 6] Software license management equipment according to claim 5 mounted in the stand-alone machine.

[Claim 7] Software license management equipment according to claim 5 with which said input means is prepared for a user host, and said license management database, said license authorization code issue means, and the renewal means of an authorization code are prepared for the license management host connected to the network with said user host.

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is drawing in this invention showing the relation between a license shelf-life and AC shelf-life.

[Drawing 2] It is the flow chart showing processing of the software license management equipment of this invention.

[Drawing 3] It is the block diagram of the software license management equipment of one example of this invention.

[Drawing 4] It is the block diagram of the software license management equipment of other examples of this invention.

[Drawing 5] It is drawing in the conventional technique showing the relation between a license shelf-life and AC shelf-life.

[Description of Notations]

1 Keyboard

2 License Management DB

3 CPU

4 CRT

5 Floppy Disk (Generation AC File)

6 License Management Host

7 User Host

8 Network

11-19 Step

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MEANS

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[Means for Solving the Problem] The software license management method of this invention has the phase of setting the shelf-life of the license which is the use right of a software application, the phase of setting the shelf-life of the authorization code which is the file for use consent acknowledgement verification which enables actual use of said software application within the limits of the shelf-life of said license based on a demand of a user, and the phase that generates said authorization code according to the demand period of said authorization code.

[0011] Moreover, the software license management equipment of this invention If a license issue processing demand is made from a license management database, an input means, and said input means and an object application name and a demand user name are inputted From these input, judge whether a license is published or not, and in publishing As license issue processing, a demand user name, an object application name,

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OPERATION

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[Function] In the license management method of this invention, a license and AC are managed separately. That is, as shown in drawing 1 , a license shelf-life and AC shelf-life are set up separately (however, AC shelf-life is restricted within a license shelf-life).  
[0013] By this, only updating should be dealt with in the generation list of AC during the post-license shelf-life when the license was once set up.

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EXAMPLE

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[Example] Next, the example of this invention is explained with reference to a drawing.

[0015] Drawing 3 is one example of this invention, and the block diagram of the software license management equipment mounted in the stand-alone machine and drawing 2 are the flow charts of the license and AC issue processing performed with software license management equipment, and AC update process.

[0016] The keyboard 1 for the software management equipment of this example to input a license issue demand, the renewal demand of AC, an object application name, a demand user name, etc., The license management DB(database) 2 on which a license shelf-life and AC shelf-life are recorded, It consists of CPU3 which performs a license and AC issue processing, AC update process, etc., CRT4 which displays the contents of an input from a keyboard 1, the contents of license management DB2, etc., and a floppy disk (generation AC file) 5 by which generated AC is stored.

[0017] Next, actuation of this license management equipment is explained.

[0018] First, a license issue demand is inputted from a keyboard 1, and object application and a demand user are inputted (step 11). Decision processing of whether to publish a license is performed from these input (step 12). In publishing a license as a result, the license shelf-life based on a contract is inputted from a keyboard 1 as license issue processing, and it records the date of issue and the license expiration date of a user name, an object application name, and an issue license as license management DB2 on a magnetic disk (step 13). Then, as AC issue processing, AC shelf-life for which a user asks is inputted from a keyboard 1, and is recorded on license management DB2 like the above of AC date of issue and the expiration date of Generation AC (step 14). Next, AC generation is performed and AC generated in the floppy disk 5 with which a user is provided is stored (step 15).

[0019] Then, when there is a renewal demand of AC by continuation use of application etc., the renewal demand of AC is performed from a keyboard 1 (step 16). Next, it judges whether based on the information on license DB2, the license is defined to an applicable user's demand application, or it has passed over the license expiration date (step 17), and if it is within a license shelf-life, AC expiration date will be recorded on AC date-of-issue list about updated AC at license management DB2 (step 18). Next, AC which described AC shelf-life is generated and it stores in a floppy disk 5 (step 19).

[0020] Drawing 4 is other examples of this invention, and is the block diagrams of the software license management equipment connected to the network.

[0021] In this example, the license management host 6 and the user host 7 are respectively connected to the network 8. A user interface program is carried in the user host 7, a user name and a demand tool name are specified in it, and the license management host 6 is accessed. License management DB2 and the program which performs AC generation / transfer processing of an applicable tool and a license management DB update process with reference to license management DB2 by access from the user host 7 are carried in the license management host 6.

[0022] When there is an AC generation input request of an applicable tool from the user host 7, in the license management host 6, an applicable license exists with reference to license management DB2, and after checking an effective thing, AC carried out in the period demanded in the range within a license

shelf-life as it is effective is generated, the record is described to license management DB2, and the generation AC file 5 is transmitted to the user host 7.

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EFFECT OF THE INVENTION

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[Effect of the Invention] As explained above, this invention has effectiveness as taken below by setting up a license shelf-life and AC shelf-life separately.

- (1) It becomes automatable [ the renewal procedure of AC issue ] within a license shelf-life.
- (2) Recovery of the fine license dues according to the die length of the use period of application is possible.
- (3) It is applicable irrespective of the existence of a network environment.
- (4) Furthermore, by the network environment, it becomes possible, and the online AC automatic issue by access from a remote place follows, and the reduction of AC issue down stream processing of it is attained.

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TECHNICAL PROBLEM

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[Problem(s) to be Solved by the Invention] Above-mentioned JP,4-104325,A; in JP,4-166218,A, the license period is defined based on the prior use contract, and each is single-engined management to it. Moreover, in them, as shown in drawing 5 , a license and AC actually carried on a user machine are under the same management.

[0007] In using the application concerned further after contract termination for the reason, the procedure of renewal of a contract is stepped on again, AC corresponding to the license which updated and updated the license succeedingly is generated, and the time and effort of reproviding for a user occurs.

[0008] When using a tool as evaluation or continuation employment, it is common to contract and repeat in the appropriate period which expects use. Furthermore, also in case the case where a tool is a large sum and license dues are large sums, and use frequency are divided over a short period of time, it is necessary to repeat a series of processings of renewal of a contract, and there is a problem that an updating man day occurs each time.

[0009] The purpose of this invention is to offer the license management method and equipment which can respond to each user's applications, such as use frequency, a use period, etc. of a software application, finely, and offer AC by the minimum man day.

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[Translation done.]

(19) 日本国特許庁 (J P)

## (12) 公開特許公報 (A)

(11) 特許出願公開番号

特開平8-76994

(43) 公開日 平成8年(1996)3月22日

(51) Int.Cl.<sup>4</sup>G 0 6 F 9/06  
17/60

識別記号

5 5 0 L 7230-5B

庁内整理番号

F I

技術表示箇所

G 0 6 F 15/ 21

Z

審査請求 有 請求項の数 7 O L (全 5 頁)

(21) 出願番号 特願平8-206527

(22) 出願日 平成8年(1994)8月31日

(71) 出願人 000004237

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東京都港区芝五丁目7番1号 日本電気株式会社内

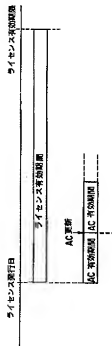
(74) 代理人 弁理士 若林 忠

(54) 【発明の名称】 ソフトウェアライセンス管理方法および装置

## (57) 【要約】

【目的】 ユーザのアプリケーション利用目的や利用期間に応じたライセンス使用料の設定ができ、また、より少ない工数でライセンス管理手続を行なうことを可能にする。

【構成】 ライセンス有効期間と A C 有効期間が別々に設定され、A C 有効期間は必要に応じて更新される。



## 【特許請求の範囲】

【請求項1】 ソフトウェアアプリケーションの利用権利であるライセンスの有効期間を定める段階と、前記ソフトウェアアプリケーションの実際の利用を可能とする利用許諾承認証明ファイルであるオーソライゼーションコードの有効期間をユーザの要求に基づいて前記ライセンスの有効期間の範囲内において定める段階と、前記オーソライゼーションコードの要求期間に応じた前記オーソライゼーションコードを生成する段階を含むソフトウェアライセンス管理方法。

【請求項2】 前記第1の段階は、ユーザ名、対象アプリケーション名、ライセンス発行日、ライセンス有効期間を記録するものである、請求項1記載のソフトウェアライセンス管理方法。

【請求項3】 前記第2の段階は、オーソライゼーションコード発行日とオーソライゼーション有効期間を記録するものである、請求項1または2記載のソフトウェアライセンス管理方法。

【請求項4】 オーソライゼーションコード更新要求があった場合、該当ユーザの要求アプリケーションに対してライセンスが設定されているか、設定されていればライセンス有効期限を過ぎているかどうかを判断し、ライセンス有効期限内であれば、更新したオーソライゼーションコードについてオーソライゼーションコード発行日とオーソライゼーションコード有効期限を記録する段階と、

オーソライゼーションコード要求期間に応じたオーソライゼーションコードを生成する段階を含む、請求項2または3記載のソフトウェアライセンス管理方法。

【請求項5】 ライセンス管理データベースと、入力手段と、

前記入手段からライセンス発行処理要求がなされ、対象アプリケーション名や要求ユーザ名が入力されると、これら入力情報から、ライセンスを発行するか否かを判断し、発行する場合には、ライセンス発行処理として、要求ユーザ名、対象アプリケーション名、ライセンス発行日および前記入手段から入力されたライセンス有効期限を前記ライセンス管理データベースに記録し、続いてオーソライゼーションコード発行処理としてオーソライゼーションコード発行日および前記入手段から入力されたオーソライゼーション有効期限を前記ライセンス管理データベースに記録し、生成したオーソライゼーションコードを媒体に格納するライセンス・オーソライゼーションコード発行手段と、

前記入手段よりオーソライゼーションコード更新要求があると、前記ライセンス管理データベースを元に、該当ユーザの要求アプリケーションに対してライセンスが設定されているか、設定されていればライセンス有効期限を過ぎているかどうかを判断し、ライセンス有効

限内であれば、更新したオーソライゼーションコードについてオーソライゼーションコード発行日とオーソライゼーションコード有効期限を前記ライセンス管理データベースに記録し、生成したオーソライゼーションコードを媒体に記録するオーソライゼーションコード更新手段を有するソフトウェアライセンス管理装置。

【請求項6】 スタンドアロマンシに実装されている請求項5記載のソフトウェアライセンス管理装置。

【請求項7】 前記入手段がユーザホストに設けられ、前記ライセンス管理データベースと前記ライセンス・オーソライゼーションコード発行手段とオーソライゼーションコード更新手段が、前記ユーザホストとともにネットワークに接続されたライセンス管理ホストに設けられている請求項5記載のソフトウェアライセンス管理装置。

【発明の詳細な説明】

【0001】

【産業上の利用分野】 本発明はソフトウェアライセンス方法に関し、特に、期間を定めてソフトウェアアプリケーションの利用を可能にするライセンス方法に関する。

【0002】

【従来の技術】 近年、ソフトウェアアプリケーションの開発の投資費用は莫大な金額にのぼり、更に例えばLSIのCAD分野でのアプリケーションでは設計上の機密情報をも含まれている点でアプリケーションを設計資料として保護し、精密情報漏洩を防止することが事業上極めて大切である。

【0003】 その為、ソフトウェア資産を保護し不正利用を防ぐ手段として、利用契約締結（ライセンス契約）とソフトウェアにプロテクションを実装することが一般的な施策として行われている。

【0004】 ライセンスはアプリケーションの利用を契約に基づく許可制にすることで、開発元の権利を守るものである。利用契約に基づきライセンス使用料を課す場合が多く、これによりアプリケーション開発元に、開発費用を回収することができる。また、ソフトウェアプロテクションは、ユーザにアプリケーションを提供する際にプロテクションを解除するAC（オーソライゼーションコード）を合わせて提供することで、当該アプリケーションの利用を許可ユーザに限定し不正使用を防止することができる。

【0005】 従来、このACはライセンス契約に基づきライセンス期間に対応した期間を有効とするものを生成しユーザに提供している。例えば、特開平4-104325号公報は、利用契約時にアプリケーションの使用期限を決定し、ツール実行時度ACを参照し実行可能かどうかを検証する手段を取っている。また、特開平1-166218号公報では、利用契約時に使用可能期間を設定する他、契約満了期限の前の警告期間並びに期限後の猶予期間を設定することで、契約期間中並びに契約期

間終了後のツール利用頻度により費用を回収する方法を提示している。

【0006】

【発明が解決しようとする課題】 前述の特開平 4-104325；特開平 4-166218 ではないけれども、事前の利用契約に基づいてライセンス期間が定められており、それに対する単発の管理である。また、それらにおいては、図 5 に示すように、ライセンスと実際にユーザマシン上に搭載される A C は同一管理下にある。

【0007】 その為、契約終了後に更に当該アプリケーションを使用する場合には、再度契約更新という手続きを踏み、引き続きライセンスを更新し、更新したライセンスに対応した A C を生成し、ユーザに提供しなおすという手順が発生する。

【0008】 ツールを評価や継続運用として利用する場合には、使用を予想する妥当期間で契約し繰り返すことが一般的である。更に、ツールが高額でありライセンス使用料が高額である場合や利用頻度が短期で区切られる際にも契約更新という一連の処理を繰り返すことが必要になり、その都度更新工数が発生するという問題がある。

【0009】 本発明の目的は、ソフトウェアアプリケーションの利用頻度や利用期間など各ユーザの用途に木目細かく対応でき、かつ最小工数で A C を提供するライセンス管理方法および装置を提供することにある。

【0010】

【課題を解決するための手段】 本発明のソフトウェアライセンス管理方法は、ソフトウェアアプリケーションの利用権利であるライセンスの有効期間を定める段階と、前記ソフトウェアアプリケーションの実際の利用を可能とする利用許諾承認検証用ファイルであるオーソライゼーションコードの有効期間をユーザの要求に基づいて前記ライセンスの有効期間の範囲内において定める段階と、前記オーソライゼーションコードの要求期間に応じた前記オーソライゼーションコードを生成する段階を有する。

【0011】 また、本発明のソフトウェアライセンス管理装置は、ライセンス管理データベースと、入力手段と、前記入力手段からライセンス発行処理要求がなされ、対象アプリケーション名や要求ユーザ名が入力されると、これら入力情報から、ライセンスを発行するか否かを判断し、発行する場合には、ライセンス発行処理として、要求ユーザ名、対象アプリケーション名、ライセンス発行日および前記入力手段から入力されたライセンス有効期限を前記ライセンス管理データベースに登録し、続いてオーソライゼーションコード発行処理としてオーソライゼーションコード発行日および前記入力手段から入力されたオーソライゼーション有効期限を前記ライセンス管理データベースに登録し、生成したオーソライゼーションコードを媒体に格納するライセンス・オー

ソライゼーションコード発行手段と、前記入力手段よりオーソライゼーションコード更新要求があると、前記ライセンス管理データベースを元に、該当ユーザの要求アプリケーションに対してライセンスが設定されているか、設定されていればライセンス有効期限を過ぎていないかどうかを判断し、ライセンス有効期限内であれば、更新したオーソライゼーションコードについてオーソライゼーションコード発行日とオーソライゼーションコード有効期限を前記ライセンス管理データベースに登録し、生成したオーソライゼーションコードを媒体に記録するオーソライゼーションコード更新手段を有する。

【0012】

【作用】 本発明のライセンス管理方法では、ライセンスと A C を別々に管理する。つまり、図 1 に示すように、ライセンス有効期間と A C 有効期間を別々に設定する（但し、A C 有効期間は、ライセンス有効期間内に制限される）。

【0013】 これにより、一旦ライセンスが設定された後ライセンス有効期間中は A C の生成並びに更新のみを取り扱えば良いことになる。

【0014】

【実施例】 次に、本発明の実施例について図面を参照して説明する。

【0015】 図 3 は本発明の一実施例で、スタンドアロンマシンに実装されたソフトウェアライセンス管理装置の構成図、図 2 はソフトウェアライセンス管理装置で行なわれるライセンス・A C 発行処理と A C 更新処理の流れ図である。

【0016】 本実施例のソフトウェア管理装置は、ライセンス発行要求、A C 更新要求、対象アプリケーション名、要求ユーザ名などを入力するためのキーボード 1 と、ライセンス有効期間、A C 有効期間が記録されるライセンス管理 DB（データベース）2 と、ライセンス・A C 発行処理、A C 更新処理などを行なう CPU 3 と、キーボード 1 からの入力内容、ライセンス管理 DB 2 の内容などを表示する CRT 4 と、生成された A C が格納されるフロッピーディスク（生成 A C ファイル）5 から構成されている。

【0017】 次に、本ライセンス管理装置の動作を説明する。

【0018】 まず、キーボード 1 からライセンス発行要求を入力し、対象アプリケーションや要求ユーザを入力する（ステップ 11）。これら入力情報から、ライセンスを発行するか否かの判断処理を行なう（ステップ 12）。結果としてライセンスを発行する場合には、ライセンス発行処理として、契約に基づいたライセンス有効期間をキーボード 1 より入力し、磁気ディスク上にライセンス管理 DB 2 としてユーザ名、対象アプリケーション名・発行ライセンスの発行日・ライセンス有効期限を記録する（ステップ 13）。引き続き、A C 発行処理と

して、ユーザが求めるAC有効期間をキーボード1より入力し、AC発行日と生成ACの有効期限を上記同様にライセンス管理DB2に記録する(ステップ14)。次に、AC生成を行ない、ユーザに提供するフロッピーディスク5に生成したACを格納する(ステップ15)。

【0019】その後、アプリケーションの継続使用等によりAC更新要求があった場合には、キーボード1よりAC更新要求を行なう(ステップ16)。次に、ライセンスDB2の情報を元に、該当ユーザの要求アプリケーションに対しライセンスが定義されているか、またライセンス有効期限を過ぎているか否かを判断し(ステップ17)、ライセンス有効期限内であれば、更新したACについてAC発行日並びにAC有効期限をライセンス管理DB2に記録する(ステップ18)。次に、AC有効期間を記述したACを生成してフロッピーディスク5に格納する(ステップ19)。

【0020】図4は本発明の他の実施例で、ネットワークに接続されたソフトウェアライセンス管理装置の構成図である。

【0021】本実施例では、ライセンス管理ホスト6とユーザホスト7が各々ネットワーク8に接続されている。ユーザホスト7にはユーザインタフェースプログラムが搭載され、その中でユーザ名・要求ツール名を指定し、ライセンス管理ホスト6にアクセスする。ライセンス管理ホスト6には、ライセンス管理DB2と、ユーザホスト7からのアクセスによりライセンス管理DB2を参照し、該当ツールのAC生成・転送処理とライセンス管理DB更新処理を行なうプログラムが搭載されている。

【0022】ユーザホスト7から該当ツールのAC生成入力要求があった場合、ライセンス管理ホスト6において、ライセンス管理DB2を参照し、該当ライセンスが存在し、かつ有効であることを確認した後、ライセンス有効期間内の範囲で要求された期間を有効とするACを生成し、その記録をライセンス管理DB2に記述し、生\*

\*成ACファイル5をユーザホスト7へ転送する。

#### 【0023】

【発明の効果】以上説明したように、本発明は、ライセンス有効期間とAC有効期間を別々に設定することにより、以下に示すような効果がある。

(1) ライセンス有効期間内において、AC発行更新手続の自動化が可能となる。

(2) アプリケーションの利用期間の長さに応じた目細かいライセンス使用料の回収が可能である。

(3) ネットワーク環境の有無に拘らず適用できる。

(4) 更に、ネットワーク環境では、遠隔地からのアクセスによるオンラインAC自動発行が可能になり、従いAC発行処理工程の低減が可能となる。

#### 【図面の簡単な説明】

【図1】本発明における、ライセンス有効期間とAC有効期間の関係を示す図である。

【図2】本発明のソフトウェアライセンス管理装置の処理を示す流れ図である。

【図3】本発明の一実施例のソフトウェアライセンス管理装置の構成図である。

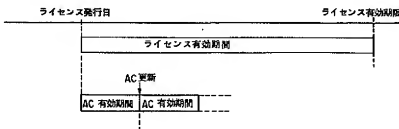
【図4】本発明の他の実施例のソフトウェアライセンス管理装置の構成図である。

【図5】従来技術における、ライセンス有効期間とAC有効期間の関係を示す図である。

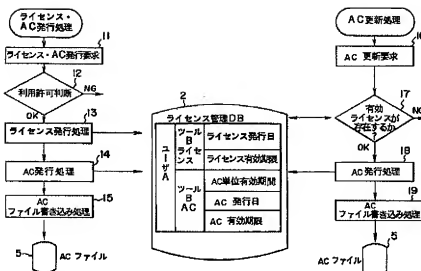
#### 【符号の説明】

- 1 キーボード
- 2 ライセンス管理DB
- 3 CPU
- 4 CRT
- 5 フロッピーディスク(生成ACファイル)
- 6 ライセンス管理ホスト
- 7 ユーザホスト
- 8 ネットワーク
- 11~19 ステップ

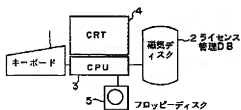
【図1】



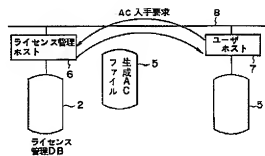
【図2】



【図3】



【図4】



【図5】

